

Summary of Testimony
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As the world's foremost securities market, the New York Stock Exchange is taking a leading role in promoting awareness of the Year 2000 Computer Problem in the securities industry and in the capital markets. The NYSE is working to ensure the compliance of our own systems and working with securities industry participants to develop solutions to the problem so that the world's securities markets will move smoothly into the next millennium. Our goal is that the first business day of the year 2000 -- January 3, 2000 -- will be just another trading day.

The potential impact of the Year 2000 Computer Problem on our nation is profound. With our economy so dependent on computers and technology, we cannot overestimate the ramifications of a substantial portion of our automated systems malfunctioning -- or possibly ceasing to operate -- on January 3, 2000. The Securities Industry Association refers to solving the Year 2000 problem as "the biggest business technology effort that the world has ever experienced."

Estimates of the cost to address the Year 2000 Computer Problem vary. One estimate to correct the problem ranges from \$500 to over \$1000 per affected computer program. Such a conversion process could cost even a medium-sized company over \$4 million. Another estimate places the cost on business and the public sector in the United States at \$100-200 billion, with the worldwide total reaching \$600 billion.

At the NYSE we are addressing the Year 2000 Computer Problem on multiple levels, beginning with the direct impact on the NYSE itself; our member firms, for whom we have oversight responsibility; our listed companies; and the effects on the securities industry as a whole. Since 1987, we have spent \$1.5 billion in new technology to provide for greater capacity and to install next-generation hardware and software. As we implemented this technology, we made many of the necessary Year 2000 changes. We are currently on schedule to have our mission critical systems in production by December 31, 1998 and estimate that our cost to achieve Year 2000 compliance will be approximately \$20 million.

Even with the current attention to addressing the Year 2000 Computer Problem, we recognize that this is an area that the private sector cannot address alone. The NYSE's regulator, the Securities and Exchange Commission, has played a critical role as a watchdog over our efforts.

The Year 2000 Computer Problem is a global concern. With the interconnectivity of world's financial markets, there is no concept of merely an "isolated" problem if a major market or financial center is not prepared for the new century. On the international level, a recent Global Round Table on the Year 2000 issue focused on the initiatives necessary to ensure that financial markets participants and the interconnected infrastructures around the world can continue to function into the new millennium. The NYSE has worked closely with both the International Federation of Stock Exchanges (FIBV) and the International Organization of Securities Commissioners (IOSC) to ensure that the global capital markets address the Year 2000 Computer issue.

We applaud the leadership of the Senate Commerce Committee as well as other Senate and House members who have brought attention to this important issue. We also commend the President for creating a Year 2000 Task Force to oversee the federal government's Year 2000 conversion progress. The creation of this task force and the requirement that Cabinet members respond to the President's inquiries will help ensure that the federal government is able "to cross the bridge" into the next millennium.

Richard A. Grasso
Chairman and Chief Executive Officer
New York Stock Exchange, Inc.
on
The Impact of the Year 2000 Computer Problem

Committee on Commerce, Science and Transportation
United States Senate
April 28, 1998

Chairman McCain, Senator Hollings and Members of the Committee. I am Richard A. Grasso, Chairman and Chief Executive Officer of the New York Stock Exchange (NYSE or Exchange). Thank you for providing me with this opportunity to discuss the impact of the year-2000 computer problem, as well as potential solutions to address this problem. We view the dimensions of this issue as enormous, with potentially disastrous global consequences to both business and government.

As the world's foremost securities market, the NYSE is taking a leading role in promoting awareness of the year-2000 computer problem among our 3,700 listed companies, which include 350 non-U.S. companies; the securities industry; and other capital markets throughout the world. We have worked hard to assure that our own systems will be Y2K compliant far in advance of the turn of the century. However, as important as our market is, it is only one, interconnected component of a global market. Much remains to be done to ensure that all the international capital market participants are prepared to move smoothly into the next millennium. Our goal is to ensure that the first business day of the year 2000 -- January 3, 2000 -- will be just another trading day throughout the world.

At the outset, Mr. Chairman, I would like to commend you and your colleague, Sen. Bennett, chairman of the Senate Banking Committee's Subcommittee on Financial Institutions and Technology, for fostering public awareness of the year-2000 problem, and for focusing attention on ways to solve this problem. I would concur with the recent statements of Dr. Andrew Grove that Congressional oversight hearings play a critical role in raising the profile of this problem and give heightened urgency to remediation efforts.

The potential economic impact of the year-2000 computer problem on our domestic and international markets is profound. With our world economy so dependent on computers and technology, we cannot overestimate the impact if a substantial portion of our automated systems malfunction - or possibly cease to operate - on January 1, 2000. Because of the interconnectivity of the world's financial markets, there is no concept of merely an "isolated" problem if a major market, financial center or market participant is not prepared for the new century.

The Securities Industry Association (SIA) refers to solving the year-2000 computer problem as "the biggest business-technology effort that the world has ever experienced."

Estimates vary on what it will cost to address the year-2000 situation. One estimate is that it could cost from \$1.00 to \$1.50 per line of code -- the equivalent of \$500 to over \$1,000 per affected computer program. Such a conversion process could cost even a medium-sized company over \$4 million. Another estimate places the cost on business and the public sector in the United States at \$100-\$200 billion and the worldwide total at \$600 billion. These estimates constantly are being revised upwards.

NYSE Efforts to Address the Year 2000 Computer Problem

At the NYSE, we are addressing the year-2000 issue on multiple levels, beginning with the direct impact of this issue on the NYSE itself, and extending to the international capital markets; our member firms, for whom we have oversight responsibility; and our listed companies, which include a dominant share of the world's major corporations. These multiple levels of response are necessary because we are part of global industry that can best address the year 2000 jointly -- through collaboration and information exchange. After discussing our activities on each level, I will conclude by offering our perspective on the role of government.

The NYSE and the Securities Industry Automation Corporation (SIAC)

The NYSE first made addressing our own year-2000 issue an Exchange priority in 1996. At that time, we designated our data-processing subsidiary, SIAC, as coordinator of our efforts to address the issue. SIAC has responsibility for addressing our mission-critical trading and regulatory systems, while we are handling internally our administrative systems. Our Senior Vice President and Chief Technology Officer is responsible for our internal year-2000 compliance efforts and for coordinating these efforts with SIAC.

Our preparations have progressed as we've introduced new technology and taken a range of other readiness measures. Over the last decade, the NYSE invested more than \$1.5 billion in new technology to provide for greater capacity or to install next-generation hardware and software. As we implemented this new technology, we made many of our necessary year-2000 changes. Most of this technology is complete, tested and in operation. The remaining portions will be finished by the middle of this year. As to other systems, we have a comprehensive program to fix, repair or retire non-compliant systems. We currently are on schedule to have our mission-critical systems in production by December 31, 1998.

We estimate that our cost to achieve year-2000 compliance will be approximately \$20 million. However, this is only the "direct" cost, and does not include any of the overall costs of our technology upgrade. In large part, our \$1 billion investment over the last decade has provided us with the ability to address this problem at an early date and to reduce our total cost in achieving compliance.

Installing year-2000-compliant systems is only one step in the process. Equally important is proper testing of our systems. We constantly test our new systems internally, and we

test the software and hardware that our vendors provide us. Following this internal testing, our next step is to test with our member firms and the rest of the investment community. In this regard, we have already begun testing between ourselves and individual member firms, and our testing program will continue throughout this year and all of 1999.

The next significant step in the testing process will be "beta testing," which is scheduled for July of this year. Under the leadership of the Securities Industry Association (SIA), the beta testing will consist of 15 to 20 member firms and all the securities markets. Not only will this test cover all products, it also will cover all aspects of the trade-processing system, from order entry to clearance and settlement. The test will simulate trade-processing for four trading days from December 29, 1999 through the first trading day of January, 2000. The beta test will check both the NYSE and member-firm systems for programming bugs, while also verifying that the test itself is effective.

Following the beta testing, we plan to participate in industry-wide testing in 1999. By this time, all of our systems should be year-2000 compliant. This round of testing will include all our member firms, all U.S. markets and all securities-industry utilities. We will conduct these tests on weekends, with all participants in the testing using year-2000-compliant production platforms. The first of these industry-wide tests is scheduled for March 1999.

International Capital Markets

The NYSE is working on a number of different fronts with international industry organizations to address year-2000 issues. In October 1997, Edward Kwalwasser, Group Executive Vice President of the NYSE, presented a memo detailing year-2000 issues to the regulatory subcommittee of the International Federation of Stock Exchanges (FIBV), and also distributed a copy of a proposed survey designed to help the FIBV collect relevant data from its members. These documents were subsequently assigned to the technology subcommittee of the FIBV.

The NYSE, acting in close collaboration with the SIA, has also raised year-2000 issues with the International Organization of Securities Commissions (IOSCO), where Mr. Kwalwasser serves as chair of the year-2000 subcommittee. Following presentations at IOSCO's general meeting in Taipei in November 1997, a member survey was provided to the subcommittee's vice chairs for Europe, Asia and South America. A copy of the survey was also made available to the Canadian Dealers Association.

Earlier this month, the Bank for International Settlements (BIS), jointly with the Basle Committee on Banking Supervision, the Committee on Payment and Settlement System, the International Association of Insurance Supervisors and the International Organization of Securities Commissions, sponsored a global roundtable on the Year 2000. Their discussions confirmed that the year-2000 issue must remain a top priority of senior

management and that public and private bodies should coordinate their focus on issues and approaches.

The sponsors recognized the complexity of the issue and recommended that financial market supervisors around the world implement programs to coordinate year-2000 readiness. To provide greater market transparency, they called on all market participants to share critical information and they formed a "Joint Year 2000 Council," comprised of senior members of each organization to coordinate their efforts. These efforts include strengthening and widening of external testing programs; improving information sharing among market participants, their vendors and service providers; establishing market conventions and procedures for dealing with potential contingencies; and reinforcing the role of oversight bodies such as supervisors and auditors.

NYSE Member Firms

More than 300 of the nation's broker-dealers that deal with the public are NYSE member firms, for which we have primary oversight responsibility as their "designated examining authority" ("DEA"). These broker-dealers carry and clear transactions for approximately 91 percent of all customer accounts maintained by U.S. registered broker-dealers. We have woven year-2000 compliance into our surveillance and examination program for these firms. As part of our monitoring process, we have created an internal year-2000 surveillance committee to coordinate our relevant surveillance and examination efforts. NYSE member-firm regulation staff members contact each of our member firms quarterly regarding the member firm's year-2000 compliance efforts. In addition, we include year-2000 readiness as part of our annual financial and operational examinations. Our efforts are focused on trying to ensure that our member firms are prepared for the industry-wide testing scheduled for early 1999.

Last May, we sent a memo to our member firms on the year-2000 problem. In that memo, we advised each firm that it should designate a senior official as having responsibility to oversee the firm's year-2000 project. We further advised the firm that it should identify the scope of its year-2000 problem and that it should allocate the people, time and money necessary to address the problem. The memo stated that, realistically, the year-2000 project should have a target completion date of December 1998, with 1999 available for system testing and adjustments.

Our May 1997 memo also asked member firms to complete a survey regarding their year-2000 plans in an effort to determine their preparedness. While we generally were pleased with the results of the survey, we identified a few firms that needed to focus more closely on this problem. In late 1997 we conducted a second survey to determine the readiness of vendors, correspondent brokers and other third parties that interface with NYSE member firms. In reviewing the responses to this survey, Exchange staff noted some minor problems, which staff members have discussed with member firms.

The Exchange has used these two surveys to establish generic milestones. As part of the

quarterly discussions with member firms, Exchange staff discuss the firms' progress towards meeting these milestones. These discussions also include updates on the milestones the firms themselves have established, as reported in the first survey. Once a firm indicates that it is year-2000 compliant, the Exchange will request a written confirmation of that fact from the firm's chief executive officer.

The SEC also is considering on an expedited basis a proposed change to its record-keeping rules to require broker-dealers with \$100,000 or more in net capital to file two reports on year-2000 readiness. These reports would cover such areas as the broker-dealer's plans to address the issue, the progress in meeting those plans and any contingency plans for any problems that may arise. The NYSE welcomes this effort, which will provide yet another surveillance and compliance tool.

NYSE member firms will need to file these reports both with the SEC and with the Exchange, as the broker-dealer's DEA. The first report would be due 45 days following adoption of the rule amendment and the second report would be due within 90 days of the broker-dealer's 1998 fiscal year-end financial statements. The SEC would require a broker-dealer's public accountant to file an attestation with the second report giving the auditor's opinion as to whether there is a reasonable basis for the broker-dealer's assertions in that report.

These reports will provide both us and the SEC with comprehensive information on year-2000 compliance efforts. In addition, the requirement for two reports will provide a basis to judge the progress of broker-dealers in developing and implementing year-2000 compliance programs. If the SEC adopts these rule amendments, the NYSE will be coordinating closely with the SEC and the other DEAs to implement the reporting requirements.

The Securities Industry

The SIA has taken a leadership role in efforts to achieve year-2000 readiness in the securities industry generally, working not only with the NYSE and our member firms, but also with all the securities markets, broker-dealers, vendors and other service providers. With the support of the NYSE, the SIA has organized conferences and seminars around the country to educate market participants on the problem and to keep the industry informed about the latest developments in the area, including testing schedules.

Under the auspices of a year-2000 steering committee, which includes senior industry members such as Robert Britz, Group Executive Vice President of the NYSE, the SIA has established numerous working committees to address specific aspects of the problem. These committees include groups focusing on, among other things, data management, testing, exchanges and utilities, third-party vendors, legal and regulatory issues and international issues. The SIA has also formed an international group to promote year-2000 readiness in other countries, where this issue may not have the same high priority as it does in the United States. Other issues, such as preparing for the conversion to the

"Euro" currency, may be crowding the agendas in other markets.

The SIA subcommittees meet regularly, both in full committee and in focus groups. These committees have been pivotal in moving the industry towards year-2000 readiness. Information on these committees, including meeting schedules and minutes of past meetings, are publicly available on the World Wide Web, which serves as a valuable source of industry information on the problem.

The discipline of this coordinated approach to addressing the year-2000 problem demonstrates how an industry can work together to achieve a common goal. As was mentioned above, this approach is also being brought increasingly to the international level.

NYSE Listed Companies

As to listed companies, in addition to holding hearings on this issue, Sen. Bennett has introduced Senate Bill 1518, which would require publicly traded companies to disclose, in their annual Form 10-K filings with the Securities and Exchange Commission (SEC), their year-2000 progress. Last year, the NYSE brought together the SEC and representatives of our listed companies to discuss this legislation, as well as the broader issue of correcting the year-2000 problem. We have continued to work closely with the SEC's Division of Corporation Finance and its director, Brian Lane, to ensure that our listed companies receive and understand the division's staff bulletins on this issue. Our listed companies need to appreciate that year-2000 remediation is likely to be material to their businesses, and that they should disclose to their shareholders and customers their progress in the conversion process.

In this regard, the SEC staff has issued Staff Legal Bulletin No. 5 on year-2000 disclosure. The bulletin reminds public companies and other SEC registrants that they must consider disclosure regarding costs, problems and uncertainties associated with the year 2000. The staff originally issued the bulletin in October 1997, and revised it in January of this year, emphasizing that if a company has not made an assessment of its year-2000 issues – or has not yet even determined whether it has material year-2000 issues – the disclosure of that known uncertainty is required.

The discipline of preparing disclosure material on the year-2000 problem will help focus a company on the steps it needs to take to address the problem. Analysts, shareholders, customers and competitors will review these disclosures, and the marketplace will help determine whether a company is adequately addressing this area. Failure to take the necessary steps will result not only in potentially harmful consequences when we turn the calendar at the end of December 1999 (if not before), but it will also adversely affect a company's stock price and customer base if the market judges that it is not devoting the necessary time and resources to this project.

The Role of Government

Even with the current attention on addressing the year-2000 problem, we recognize that this is an area that the private sector cannot address alone. As noted above, the SEC has addressed this area both with respect to disclosure by public companies and through its oversight of participants in the securities industry.

In addition, government performs a vital task by calling attention to the problem and reinforcing the need for prompt action in both the public and private sectors. In particular, hearings such as these surface important issues that require coordinated effort to resolve. We commend your efforts, and applaud President Clinton for creating a year-2000 task force to oversee the federal government's year-2000 conversion progress. The creation of this task force and the requirement that cabinet secretaries respond to the President's inquiries about the particular progress of cabinet departments and federal agencies will help ensure that the federal government is able to "cross the bridge" into the next millennium.

Thank you for the opportunity to present this testimony.

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